

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Rajiv Kumar et al.
Serial No. : 10/824,632
Filed : April 14, 2004
Title : IEX-1 KNOCKOUT ANIMALS

Art Unit : 1632
Examiner : Joanne Hama, Ph.D.

MAIL STOP AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants request consideration of the references listed on the attached PTO-1449 form. Under 37 C.F.R. § 1.98 (a)(2)(ii), only copies of foreign patent documents and/or non-patent literature are enclosed. Copies of any listed U.S. patents or U.S. patent application publications can be provided upon request.

This statement is being filed after a first Office action on the merits, but before receipt of a final Office action or a Notice of Allowance. A check for \$180 in payment of the late submission fee of §1.17(p) is enclosed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: July 11, 2005

J. Patrick Finn III, Ph.D.
Reg. No. 44,109

Fish & Richardson P.C., P.A.
60 South Sixth Street, Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

60295475.doc

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

07/15/2005 ZJUHAR1 00000040 10824632
01 FC:1806 180.00 0P

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

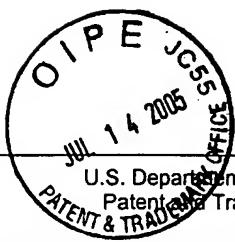
July 11, 2005

Date of Deposit

Signature

Judy Wasilkus

Typed or Printed Name of Person Signing Certificate

Substitute Form PTO-1449
(Modified)U.S. Department of Commerce
Patent and Trademark OfficeAttorney's Docket No.
07039-523001Application No.
10/824,632**Information Disclosure Statement
by Applicant**

(Use several sheets if necessary)

(37 CFR §1.98(b))

Applicant
Rajiv Kumar et al.Filing Date
April 14, 2004Group Art Unit
1632**U.S. Patent Documents**

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	5,973,117	10/26/99	Onda et al.			
	2	6,399,316	06/04/02	Onda et al.			

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	3	Barbee et al., "Hemodynamics in Transgenic Mice With Overexpression of Atrial Natriuretic Factor," <u>Circ. Res.</u> , 1994, 74:747-751
	4	Chan and Fiscus, "Guanylyl cyclase inhibitors NS2028 and ODQ and protein kinase G (PKG) inhibitor KT5823 trigger apoptotic DNA fragmentation in immortalized uterine epithelial cells: anti-apoptotic effects of basal cGMP/PKG," <u>Mol. Hum. Reprod.</u> , 2003, 9(12):775-783
	5	Chan and Fiscus, "Vasorelaxant response to isoprenaline, nitric oxide donor, calcitonin gene-related peptide and vasoactive intestinal peptide in aortic rings of adult C57BL/6J mice," <u>Eur. J. Pharmacol.</u> , 2001, 431:229-236
	6	Chan and Fiscus, "Vasorelaxations Induced by Calcitonin Gene-related Peptide, Vasoactive Intestinal Peptide, and Acetylcholine in Aortic Rings of Endothelial and Inducible Nitric Oxide Synthase-Knockout Mice," <u>J. Cardiovasc. Pharmacol.</u> , 2003, 41:434-443
	7	Charles et al., "Genomic structure, cDNA sequence, and expression of <i>gly96</i> , a growth factor-inducible immediate-early gene encoding a short-lived glycosylated protein," <u>Oncogene</u> , 1993, 8:797-801
	8	De Keulenaer et al., "Identification of IEX-1 as a Biomechanically Controlled Nuclear Factor- κ B Target Gene That Inhibits Cardiomyocyte Hypertrophy," <u>Circulation Research</u> , 2002, 90:690-696
	9	d'Uscio et al., "Mechanism of Endothelial Dysfunction in Apolipoprotein E-Deficient Mice," <u>Arterioscler. Thromb. Vasc. Biol.</u> , 2001, 21:1017-1022
	10	Feldman et al., "Validation of a mouse conductance system to determine LV volume: comparison to echocardiography and crystals," <u>Am. J. Physiol. Heart Circ. Physiol.</u> , 2000, 279:H1698-H1707
	11	Feldmann et al., "Expression of an immediate early gene, IEX-1, in human tissues," <u>Histochem. Cell Biol.</u> , 2001, 115:489-497
	12	Fiscus et al., "CGRP Release and Synergistic Interactions with Nitric Oxide: Implications for Pathogenesis of Septic Shock and the Vascular Problems of Diabetes Mellitus and Aging," <u>TheScientificWorld</u> , 2001, 1(S1):2, Abstract
	13	Grynkiewicz et al., "A New Generation of Ca^{2+} Indicators with Greatly Improved Fluorescence Properties," <u>J. Biol. Chem.</u> , 1985, 260(6):3440-3450
	14	Hart et al., "Effects of avertin versus xylazine-ketamine anesthesia on cardiac function in normal mice," <u>Am. J. Physiol. Heart Circ. Physiol.</u> , 2001, 281:H1938-H1945
	15	Hosogai et al., "Phosphodiesterase type 5 inhibition ameliorates nephrotoxicity induced by cyclosporin A in spontaneous hypertensive rats," <u>Eur. J. Pharmacol.</u> , 2003, 477:171-178
	16	Im et al., "Characterization of a novel hexameric repeat DNA sequence in the promoter of the immediate early gene, IEX-1, that mediates 1 α ,25-dihydroxyvitamin D ₃ -associated IEX-1 gene repression," <u>Oncogene</u> , 2002, 21:3706-3714

Examiner Signature

Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 07039-523001	Application No. 10/824,632
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Rajiv Kumar et al.	
		Filing Date April 14, 2004	Group Art Unit 1632

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	17	Im et al., "Divergent Regulation of the Growth-promoting Gene <i>IEX-1</i> by the p53 Tumor Suppressor and Sp1," <i>J. Biol. Chem.</i> , 2002, 277(17):14612-14621
	18	Knowles et al., "Pressure-independent enhancement of cardiac hypertrophy in natriuretic peptide receptor A-deficient mice," <i>J. Clin. Invest.</i> , 2001, 107:975-984
	19	Kondratyev et al., "Identification and characterization of a radiation-inducible glycosylated human early-response gene," <i>Cancer Res.</i> , 1996, 56(7):1498-1502
	20	Krege et al., "A Noninvasive Computerized Tail-Cuff System for Measuring Blood Pressure in Mice," <i>Hypertension</i> , 1995, 25:1111-1115
	21	Kumar et al., "A Novel Immediate Early Response Gene, IEX-1, Is Induced by Ultraviolet Radiation in Human Keratinocytes," <i>Biochem. Biophys. Res. Commun.</i> , 1998, 253:336-341
	22	Laemmli, "Cleavage of Structural Proteins during the Assembly of the Head of Bacteriophage T4," <i>Nature</i> , 1970, 227:680-685
	23	Lehoux and Tedgui, "All Strain, No Gain: Stretch Keeps Proliferation at Bay via the NF- κ B Response Gene <i>iex-1</i> ," <i>Circ. Res.</i> , 2003, 93:1139-1141
	24	Li et al., "Targeted Mutation of the DNA Methyltransferase Gene Results in Embryonic Lethality," <i>Cell</i> , 1992, 69:915-926
	25	Lutz et al., "Calbindin D _{28K} interacts with Ran-binding protein M: identification of interacting domains by NMR spectroscopy," <i>Biochem. Biophys. Res. Commun.</i> , 2003, 303:1186-1192
	26	Matsubara et al., "Logistic Time Constant of Isovolumic Relaxation Pressure-Time Curve in the Canine Left Ventricle. Better Alternative to Exponential Time Constant," <i>Circulation</i> , 1995, 92:2318-2326
	27	Ohki et al., "Identification of mechanically induced genes in human monocytic cells by DNA microarrays," <i>J. Hypertens.</i> , 2002, 20:685-691
	28	Ortiz et al., "Role of Endothelin and Isoprostanes in Slow Pressor Responses to Angiotensin II," <i>Hypertension</i> , 2001, 37:505-510
	29	Pietzsch et al., "Genomic Organization, Promoter Cloning, and Chromosomal Localization of the Dif-2 Gene," <i>Biochem. Biophys. Res. Commun.</i> , 1998, 245:651-657
	30	Ray et al., "Isolation of vascular smooth muscle cells from a single murine aorta," <i>Methods Cell Sci.</i> , 2002, 23:185-188
	31	Sanger et al., "DNA Sequencing with Chain-terminating Inhibitors," <i>Proc. Natl. Acad. Sci. USA</i> , 1977, 74(12):5463-5467
	32	Schäfer et al., "Human PACAP Response Gene 1 (p22/PRG1): Proliferation-Associated Expression in Pancreatic Carcinoma Cells," <i>Pancreas</i> , 1999, 18(4):378-384
	33	Schafer et al., "PRG1: a novel early-response gene transcriptionally induced by pituitary adenylate cyclase activating polypeptide in a pancreatic carcinoma cell line," <i>Cancer Res.</i> , 1996, 56(11):2641-2648
	34	Schulze et al., "Biomechanically Induced Gene <i>iex-1</i> Inhibits Vascular Smooth Muscle Cell Proliferation and Neointima Formation," <i>Circ. Res.</i> , 2003, 93:1210-1217
	35	Senthil et al., "Evidence of oxidative stress in the circulation of ovarian cancer patients," <i>Clin. Chim. Acta</i> , 2004, 339:27-32
	36	Taylor et al., "Altered Expression of Small-Conductance Ca ²⁺ -Activated K ⁺ (SK3) Channels Modulates Arterial Tone and Blood Pressure," <i>Circ. Res.</i> , 2003, 93:124-131

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 07039-523001	Application No. 10/824,632
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Rajiv Kumar et al.	
		Filing Date April 14, 2004	Group Art Unit 1632

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	37	Thomas and Capecchi, "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells," <u>Cell</u> , 1987, 51:503-512
	38	Thompson and Appleman, "Multiple Cyclic Nucleotide Phosphodiesterase Activities from Rat Brain," <u>Biochemistry</u> , 1971, 10(2):311-316
	39	Towbin et al., "Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: Procedure and some applications," <u>Proc. Natl. Acad. Sci. USA</u> , 1979, 76(9):4350-4354
	40	Tsuneyoshi et al., "Ca ²⁺ - and Myosin Phosphorylation-independent Relaxation by Halothane in K ⁺ -depolarized Rat Mesenteric Arteries," <u>Anesthesiology</u> , 2003, 99:656-665
	41	van Deursen, "Gene Targeting in Mouse Embryonic Stem Cells," <u>Meth. Mol. Biol.--Transgenic Mouse Methods and Protocols</u> , 1994, 209:145-158
	42	Weinmann and Farnham, "Identification of unknown target genes of human transcription factors using chromatin immunoprecipitation," <u>Methods</u> , 2002, 26:37-47
	43	Weiss et al., "Hemodynamic Determinants of the Time-Course of Fall in Canine Left Ventricular Pressure," <u>J. Clin. Invest.</u> , 1976, 58:751-760
	44	Wu et al., "IEX-1L, an Apoptosis Inhibitor Involved in NF-κB-Mediated Cell Survival," <u>Science</u> , 1998, 281:998-1001
	45	Yamamoto et al., "Left Ventricular Diastolic Dysfunction in Patients with Hypertension and Preserved Systolic Function," <u>Mayo Clin. Proc.</u> , 2000, 75:148-155
	46	Yang et al., "Validation of Conductance Catheter System for Quantification of Murine Pressure-Volume Loops," <u>J. Invest. Surg.</u> , 2001, 14:341-355
	47	Zhang et al., "Impaired apoptosis, extended duration of immune responses, and a lupus-like autoimmune disease in IEX-1-transgenic mice," <u>Proc. Natl. Acad. Sci. USA</u> , 2002, 99(2):878-883

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	